

Documentation Planning Meeting 2019

1. Goals for this year
2. Feedback on release v10.5
3. New work-flow with git
4. Old guides: FAQ, Introduction-to-G4
5. Physics lists:
 - Basic user guide
 - Physics list guide
 - Auto-generated documents
 - Differentiation between reference, generic, modular and physics list factories

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Release 10.5

- Things were relatively calm and smooth this year
- Still the documentation release was 5 days after the code
 - Should we aim to be synchronised?
- References and labels are a bit delicate
 - Please try to modify these at the earliest opportunity
- Sphinx was updated in November, which initially delayed things
- Continuous Integration should be our friend
 - I have updated the CI script so it will now do a test build of both html and latex for all 7 guides. Therefore it actually means something!
- Some areas need improvement/modification
 - Plan for a “delta” release, maybe in sync with a code patch release?

Release 10.5 Issues

- The Physics List Guide needs some work
 - There is a fair amount of cut and paste
 - Replace with ONE description and a table indicating which components are present in each reference PL?
 - Some descriptions are either missing or make no sense (e.g. ICRU73Q0 or ICRU73QO or Quantum Oscillator)
 - We still don't have a basic description about what a physics list is:
 - e.g. reference, or factory or flat?
 - What else?
- Application Developer's Guide
 - Transportation description in magnetic fields
 - Now more extensive, currently sitting in an appendix
 - Does this highlight or hide the functionality? There aren't many appendices. It's too detailed for the initial description of using the transportation process
 - Suggestions?

Things missing

- Some commands: auto-generated – since 10.2?
 - Needs further investigation
 - Command /create/HTML actually crashes Qt...
- Some references – PRM
 - Private communications?
 - Please don't remove (even if not used it's a bibtex library and might)
 - Highlight missing ones
- Search at a “higher” level
 - is it possible for sphinx to “see” the other guides?
 - Limit search to only go down
- ...
- What else?

PRM

- Multiple Scattering detailed explanation – Mihaly work item
- Restructuring of chapters
- A lot of historical info
- Sometimes detailed description of a not very precise model and only a little description of an improved one...
- References need to be maintained/updated
 - To be published from 2004 doesn't make sense....

FAQ and Intro-G4

- Now up to date
- Still room to improve? Or obsolete?
- First access point for new users (?!)
- How to improve?

Physics Lists

- Missing a novice/basic users guide explaining
 - why we have physics lists?
 - what the (technical) variations are?
 - what's suitable? (use-case reference physics lists)
- Physics list guide – first release, but probably needs more work
- Auto-generated documents
- Differentiation between reference, generic, modular and physics list factories
 - Robert has already agreed to do a 1 page description
- Co-ordination between
 - physics list and validation and examples Working Groups

Git Workflow

- Since release 10.5 the permissions on git documentation repository have been changed to reflect the situation with the source code
- Contributors now need to fork the repository and then submit a merge request to have it combined with the master
- This should make things clearer, cleaner and prevent unexpected changes to the master
- Use the CI to help check your updates
 - A merge request will trigger an html and latex build of all 7 guides with the current version of sphinx
- Please re-base before making merge requests (as before)

Git Workflow - Forking

- The Git workflow for contributing edits to Geant4 Documentation is a slightly simpler version of that for the Geant4 code
 - <https://gitlab.cern.ch/geant4/geant4-dev/blob/master/CONTRIBUTING.rst>
 - Setting up Git/GitLab
 - Creating a Fork and Local Clone
 - Creating Topic Branches and submitting them a Merge Requests to the authoritative repository
- Translate directly to Geant4 Documentation simply by replacing any “geant4-dev.git” name or URL with “geant4-documentation.git”
 - You **do not** need to add @geant4bot as a Maintainer to your fork of `geant4-documentation.git`
 - You **do not** need to name your Topic Branches according to category (e.g. `global-V10-05-00`) as this concept does not exist in documentation
 - We recommend you choose a name reflecting the work being done
 - There are no `History` files in Documentation, so you do not need to update these
 - For now, you should always target the `master` branch.
- GitLab CI is used for testing instead of Jenkins, and you can reviewing test results in the "Pipeline" entries GitLab will post on your Merge Requests's page.

Git Workflow - example

- Once you have created your Fork, clone it:
 - \$ git clone ssh://git@gitlab.cern.ch:7999/[YOUR_CERN_ID]/geant4-documentation.git
 - \$ cd geant4-documentation
- Add the authoritative repository as the `upstream` remote:
 - \$ git remote add upstream ssh://git@gitlab.cern.ch:7999/geant4/geant4-documentation.git
- Create a Topic Branch off of the `master` branch on which to make the edits.
 - Name this appropriately for the changes being made, e.g.
 - \$ git checkout master
 - \$ git fetch upstream
 - \$ git rebase upstream/master
 - \$ git checkout -b update-ui-commands master
- Then continue as before with git add, commit, push...
- See the README.md in the top-level of our documentation git

Restructured Guides?

- One thing to think about is the guide structure
 - Does it make sense to have 7 guides?
 - Should we have more, less, different ones?
 - For example some advanced information is split between the PRM, BfAD, and BfTD. Although this makes sense it means the information is aggregated by **topic**, but instead level of **application**.
- What about the hierarchy?
 - Should we have a super-level of document where sphinx controls the top level
 - Advantage is that search and intra-guide linking would be global
 - The style would be consistent from the start of the documentation info
 - Disadvantage is that pdf might get complicated, differentiation between guides would also be less succinct.

Work Plan ~~2018~~ 2019

- After the efforts of last year we should profit from the convenience and ease of documentation maintenance
- Please encourage contributions from working groups
- Main areas for me: PLG and PRM
- Anything specific outside of “maintain category descriptions”?
- Videos?

- Let's continue to improve and update the documentation now things are more stable
 - Everybody benefits (I think)

Anything else?

- Do take note of the new fork → MR work-flow
- **I will remove the .tex files from the repository**
 - **Only present for the migration task**
 - **Some contributors got confused for release 10.5**
- The file-system will shortly move from afs to EOS: Please let me know if anything is missing (click around)
- What else?